

Service Repair Documentation

Level 2.5 – CFX 65



Release	Date	Department	Notes to change
1.0	10.11.2004	ICM MP CCQ GRM T	New document

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Introduction

This Service Repair Documentation is intended to carry out repairs on Siemens repair level 2.5. The described failures shall be repaired in Siemens authorized local workshops only.

All repairs have to be carried out in an ESD protected environment and with ESD protected equipment/tools. For all activities the international ESD regulations have to be considered.

Assembling/ disassembling has to be done according to the latest CFX65 Level 2 repair documentation. It has to be ensured that every repaired mobile phone is checked according to the latest released General Test Instruction document (both documents are available in the Technical Support section of the C-market).

If you have any questions regarding the repair procedures or technical questions do not hesitate to contact our technical support team in Kamp-Lintfort, Germany:

Tel.: +49 2842 95 4666

Fax: +49 2842 95 4302

e-mail: st-support@klf.siemens.de

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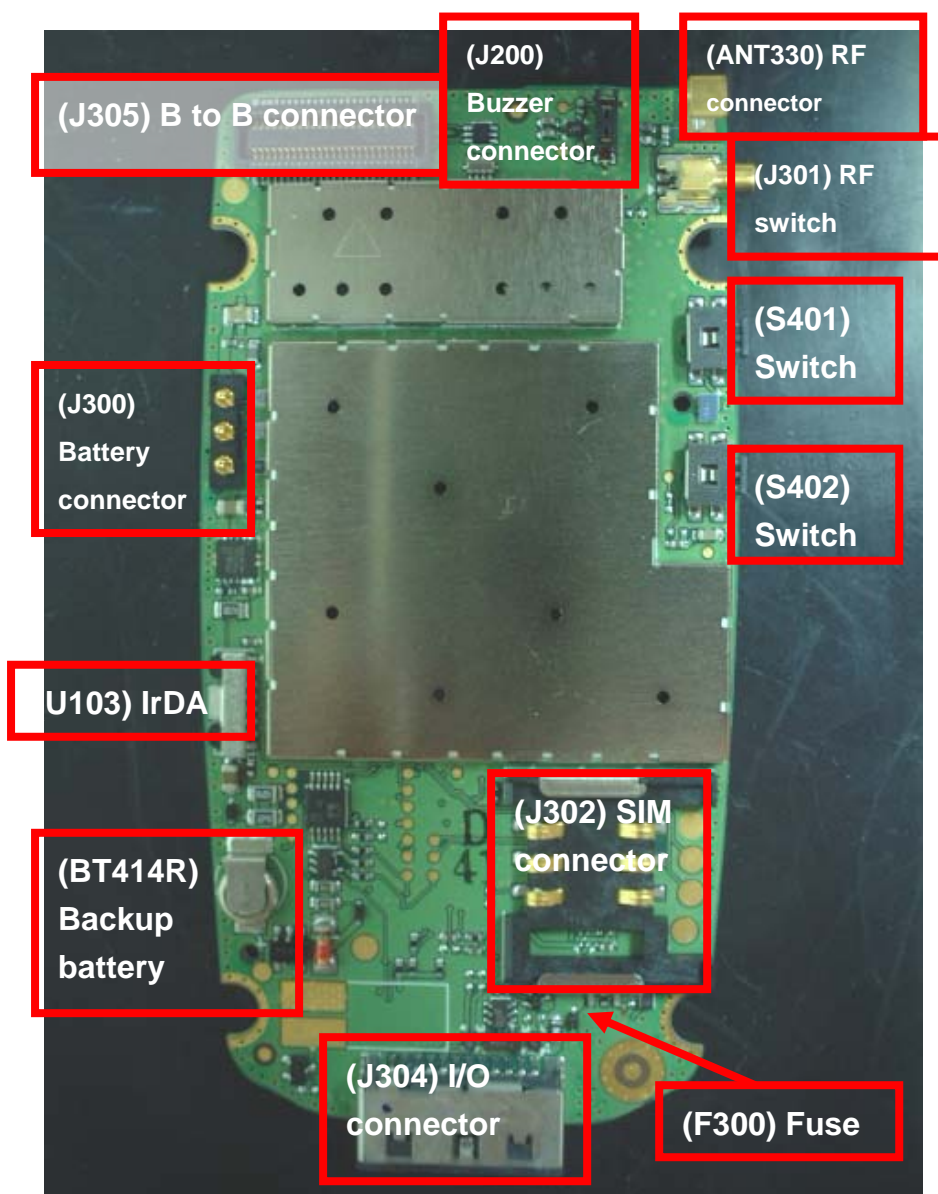
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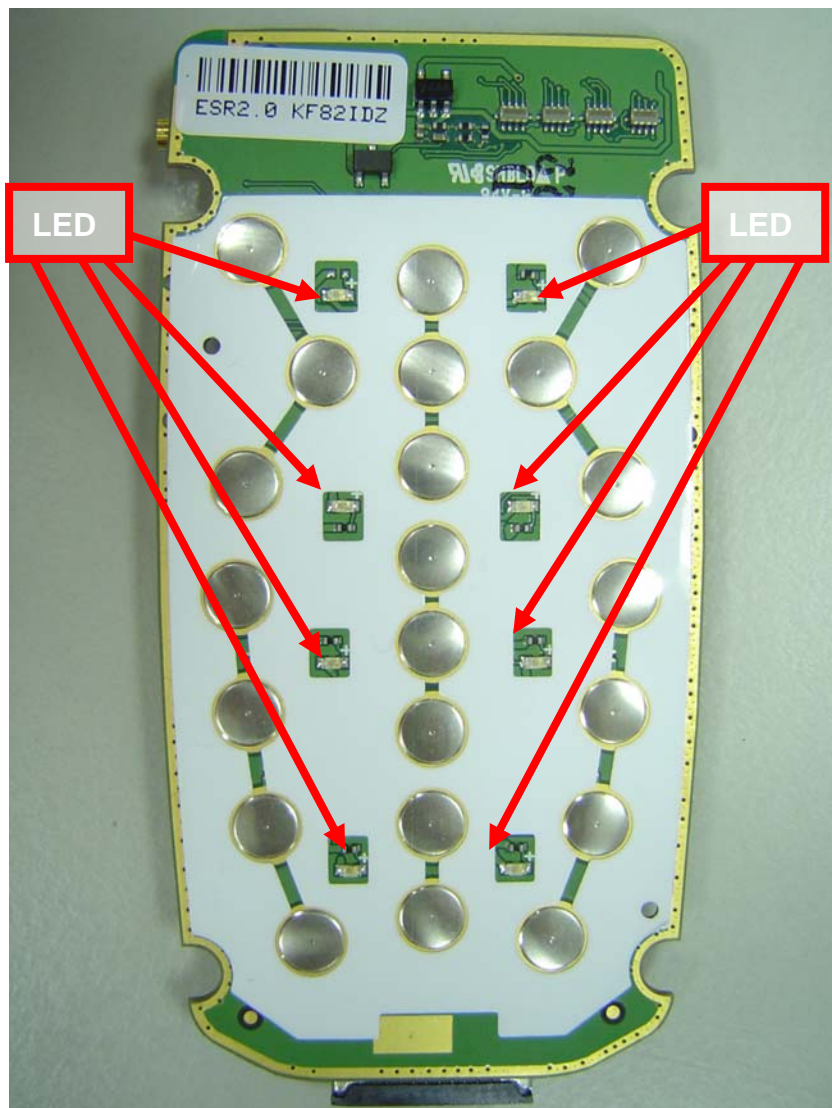
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CFX 65 board layout

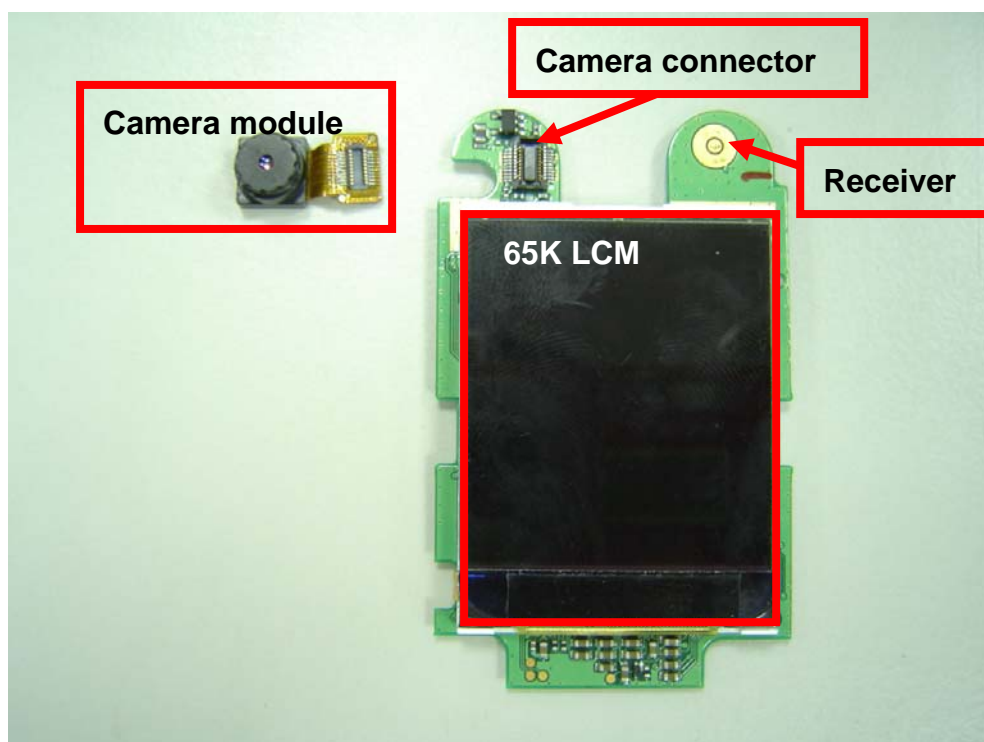
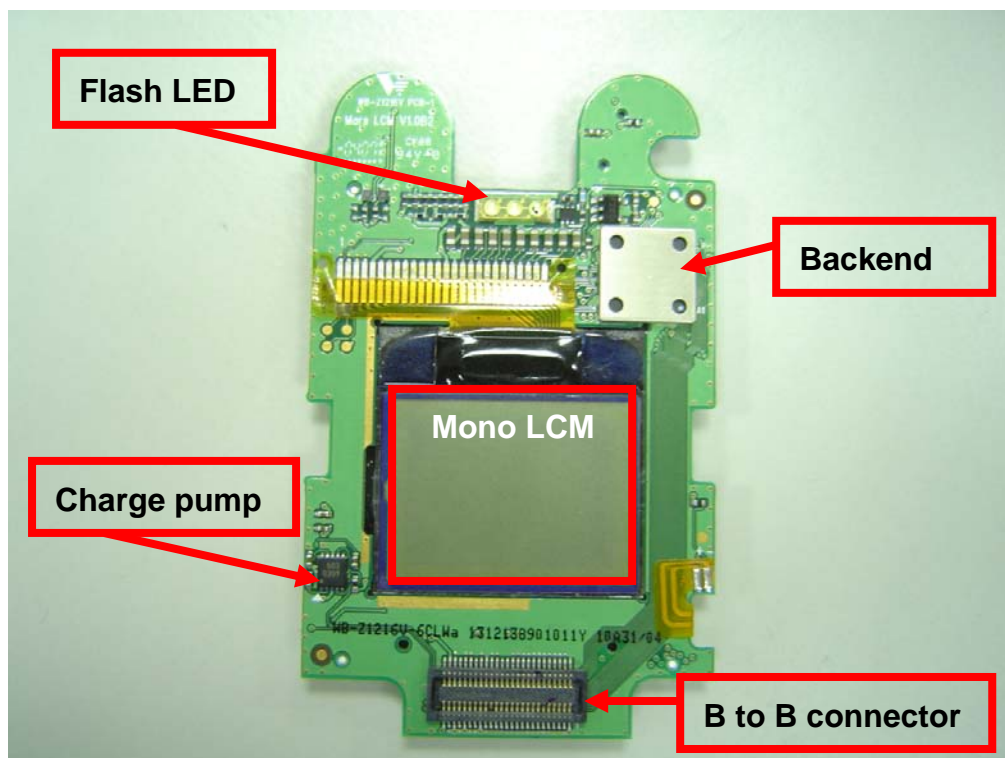
Jigs, tools and working materials for all described repairs:

- hot air blower
- soldering iron
- a pair of tweezers
- flux
- solder



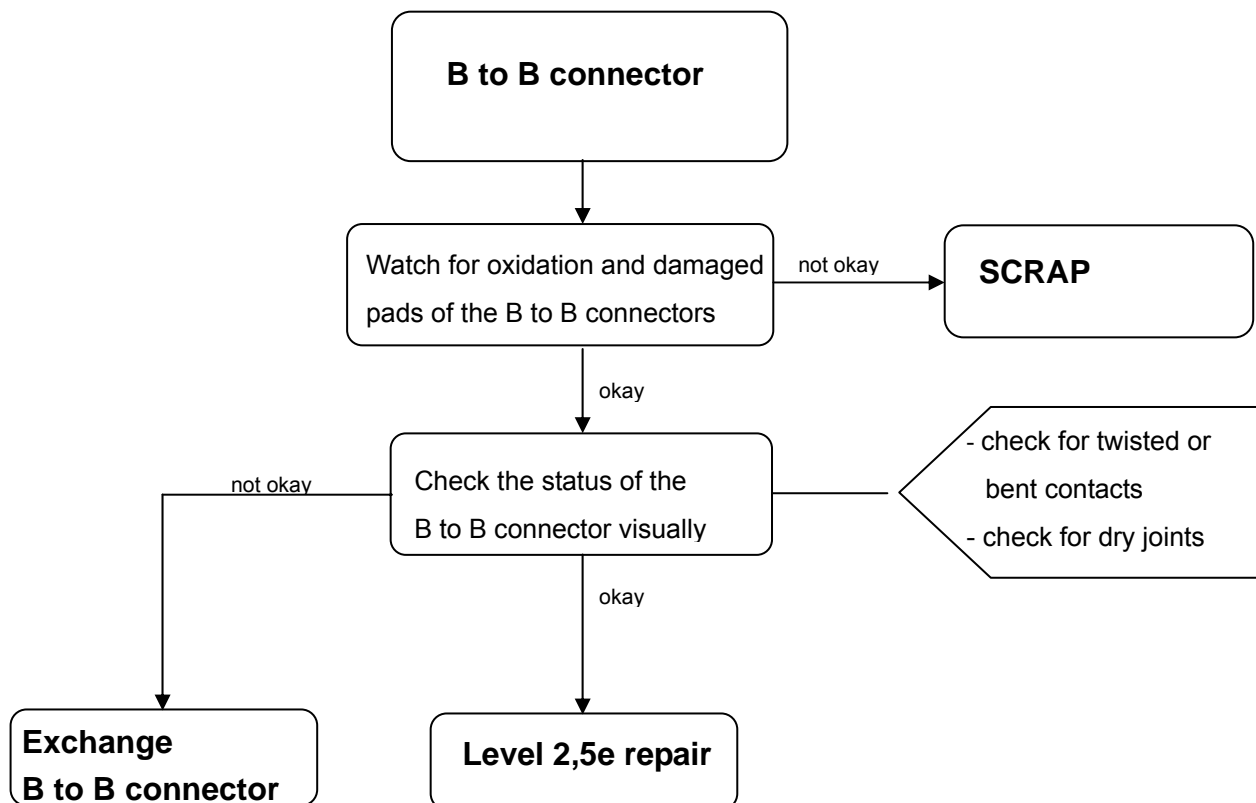


LCM layout



1. B to B connector (J305)

Fault symptoms	
Customer	GRT
No display but main board works	n/a
Camera and/ or earpiece does not work	



Connector board to board

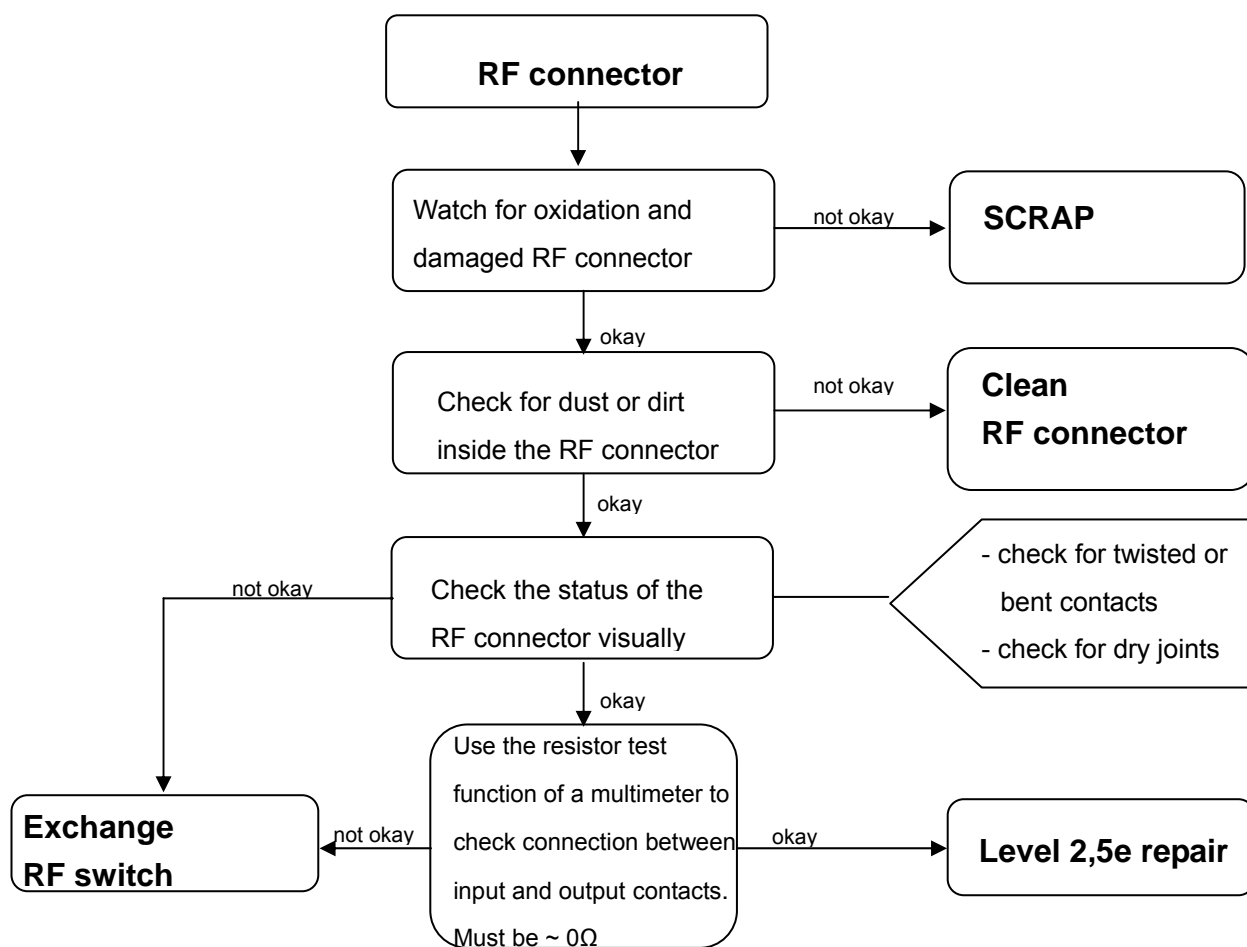
Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number: L50634-Z97-C377
 Soldering temperature: 240 - 255°C
 IRIS diagnosis code: BA000 Accessories/ Camera
 21000 Display/ Performance
 22000 Display/ Background illumination

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2. RF switch (ANT300)

Fault symptoms	
Customer	GRT
Network search	Failure in TX/ RX measurements
No location update	No location update possible



Connector RF

Use hot air blower to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number: L50615-Z77-C239

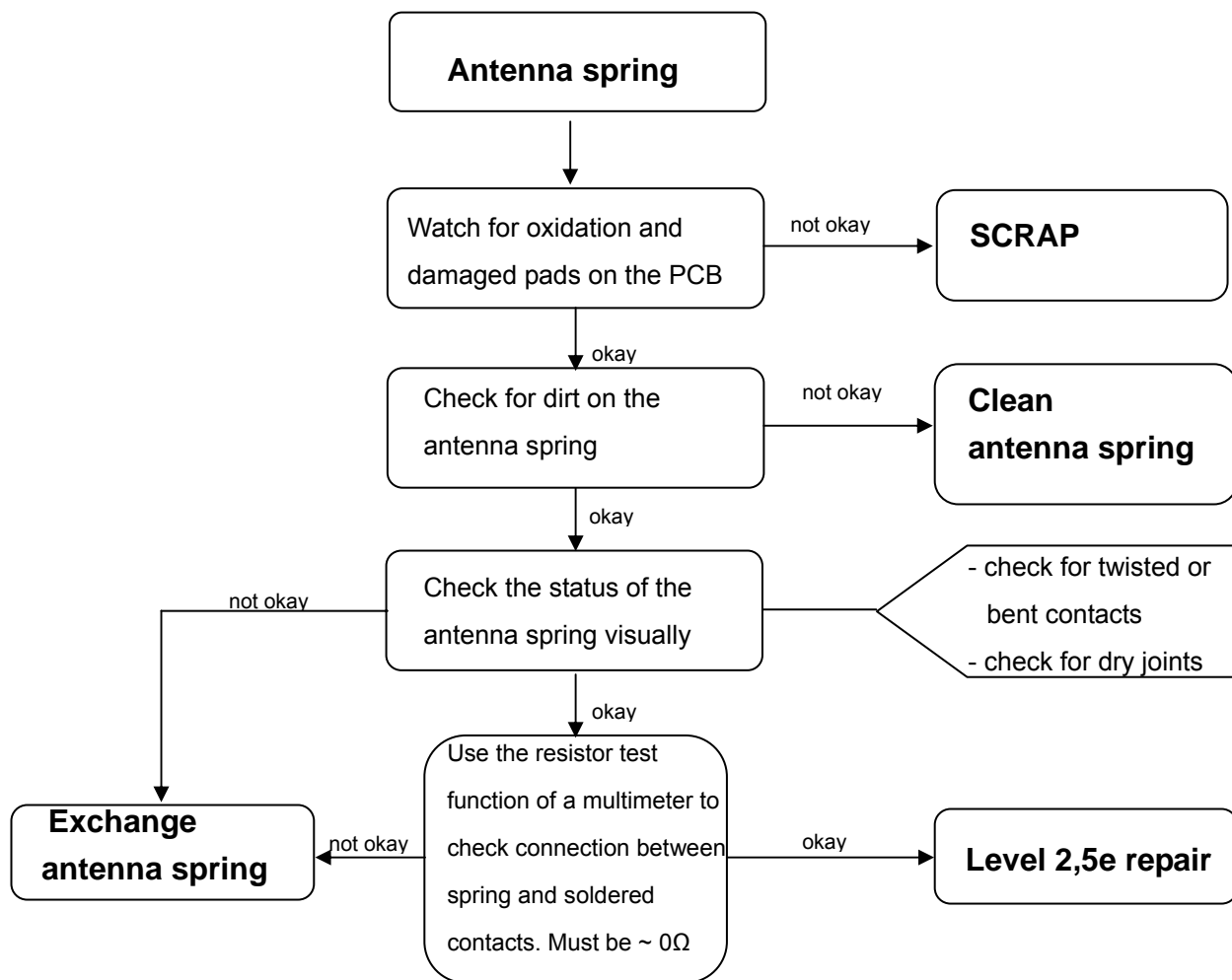
Soldering temperature: 240 - 255°C

IRIS diagnosis code: 45100 Interfaces/ Antenna connector/ No function

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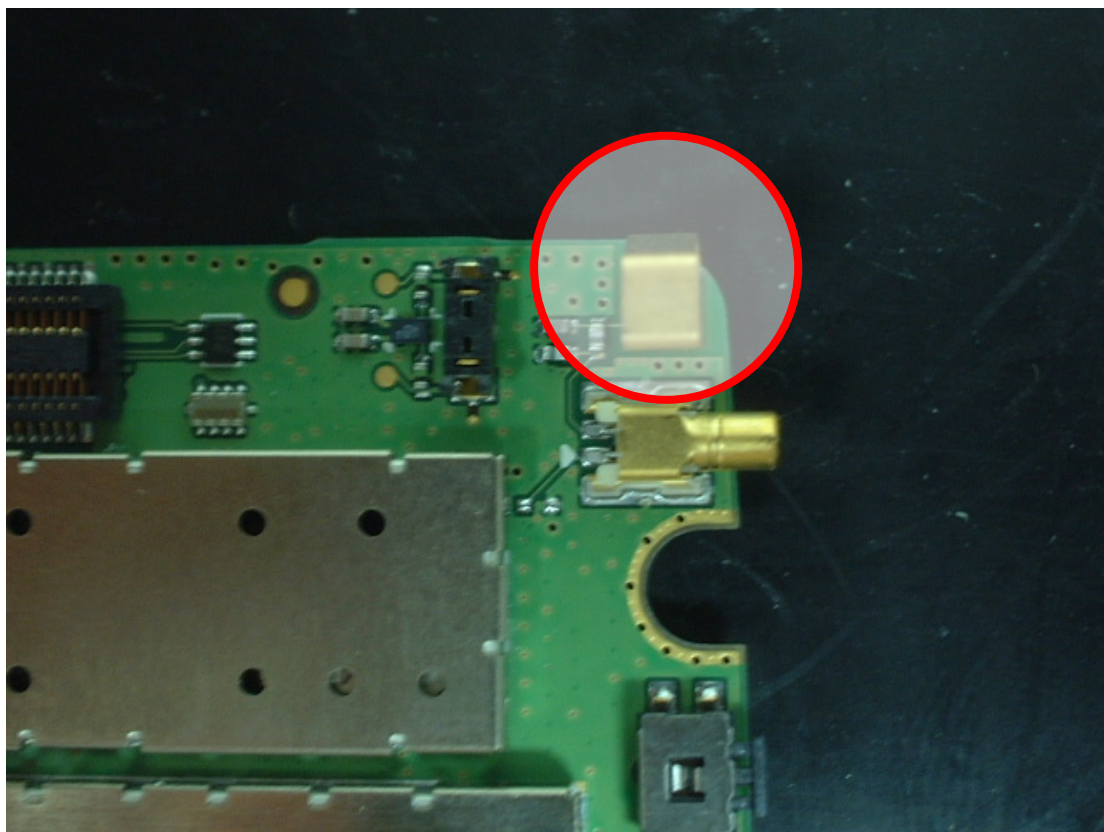
3. Antenna spring (J301)

Fault symptoms	
Customer	GRT
Poor network	Failure in RX/ TX measurements
No network	No location update possible



Antenna spring

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

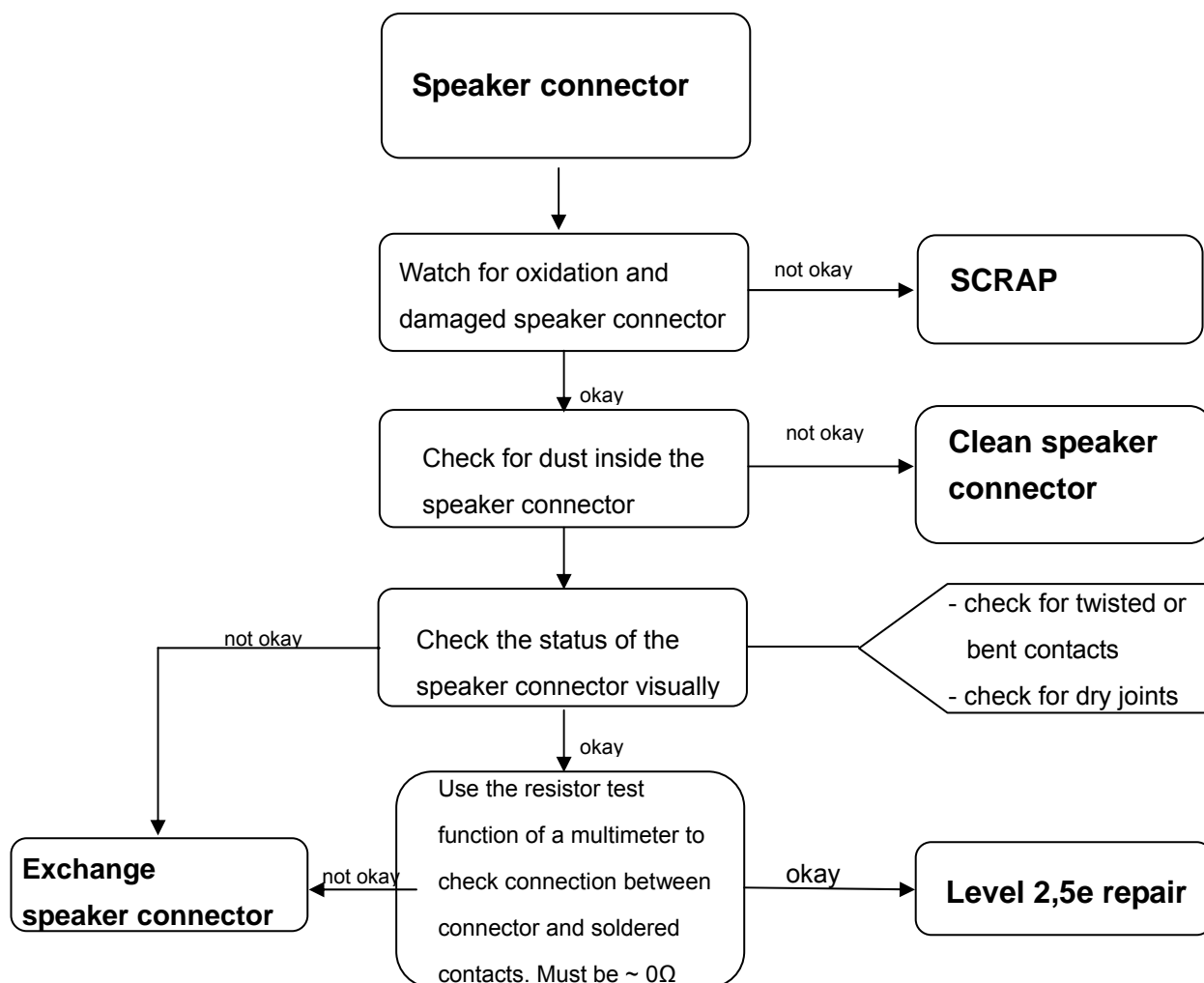


E-commerce order number: L50658-A136-B16
Soldering temperature: 240 - 255°C
IRIS diagnosis code: 83140 TX power fault internal antenna

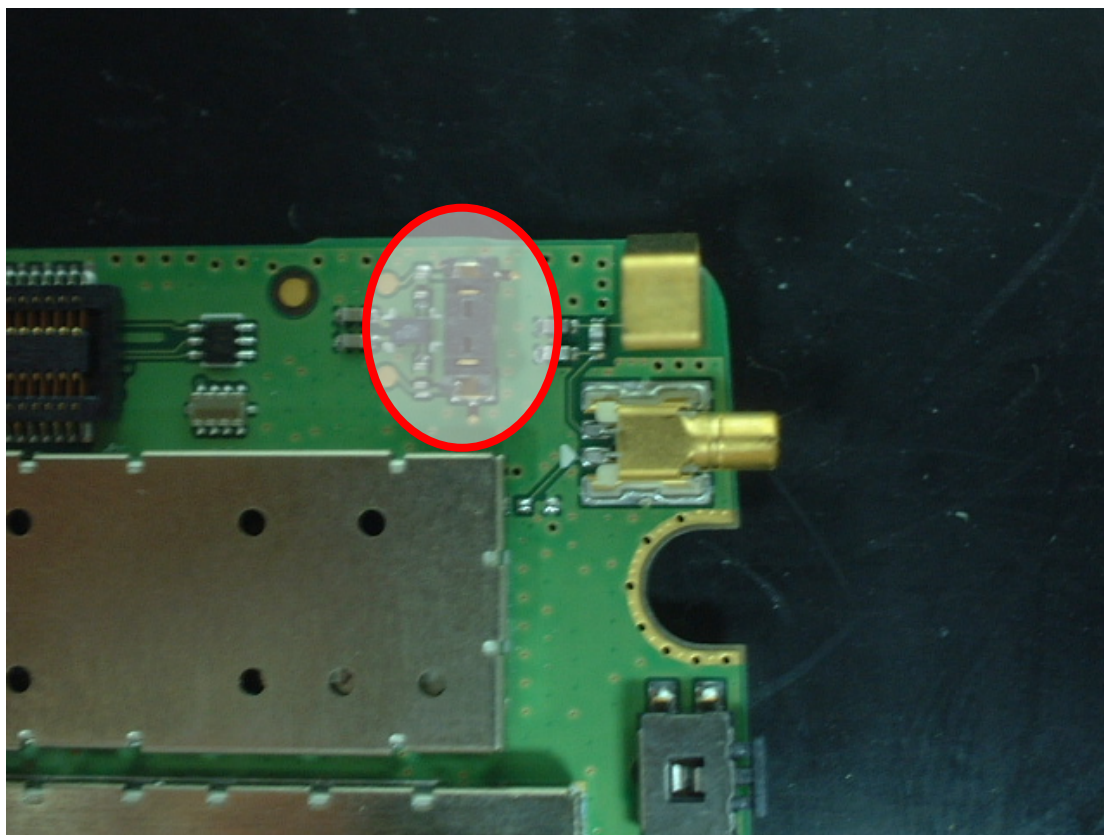
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4. Speaker connector (J200)

Fault symptoms	
Customer	GRT
No sound from speaker The speaker is barely to hear	Audio loop test fails



Speaker connector



Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

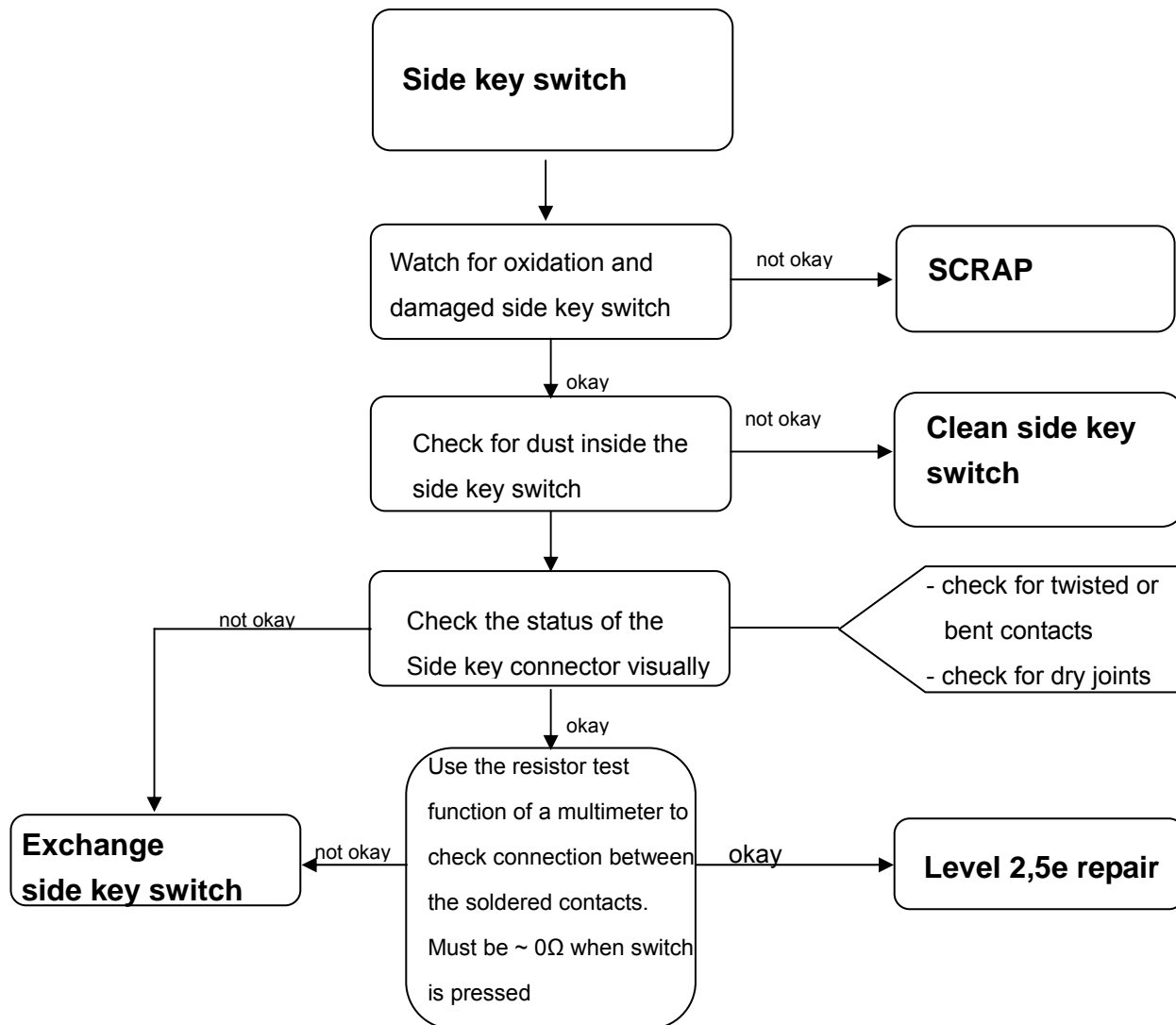
E-commerce order number: L50634-Z97-C381

Soldering temperature: 240 - 255°C

IRIS diagnosis code: 72110 Acoustics

5. Side key switch (S400,S401)

Fault symptoms	
Customer	GRT
No function while pressing	n/a
Pressing feeling is bad	



Side key switch

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.



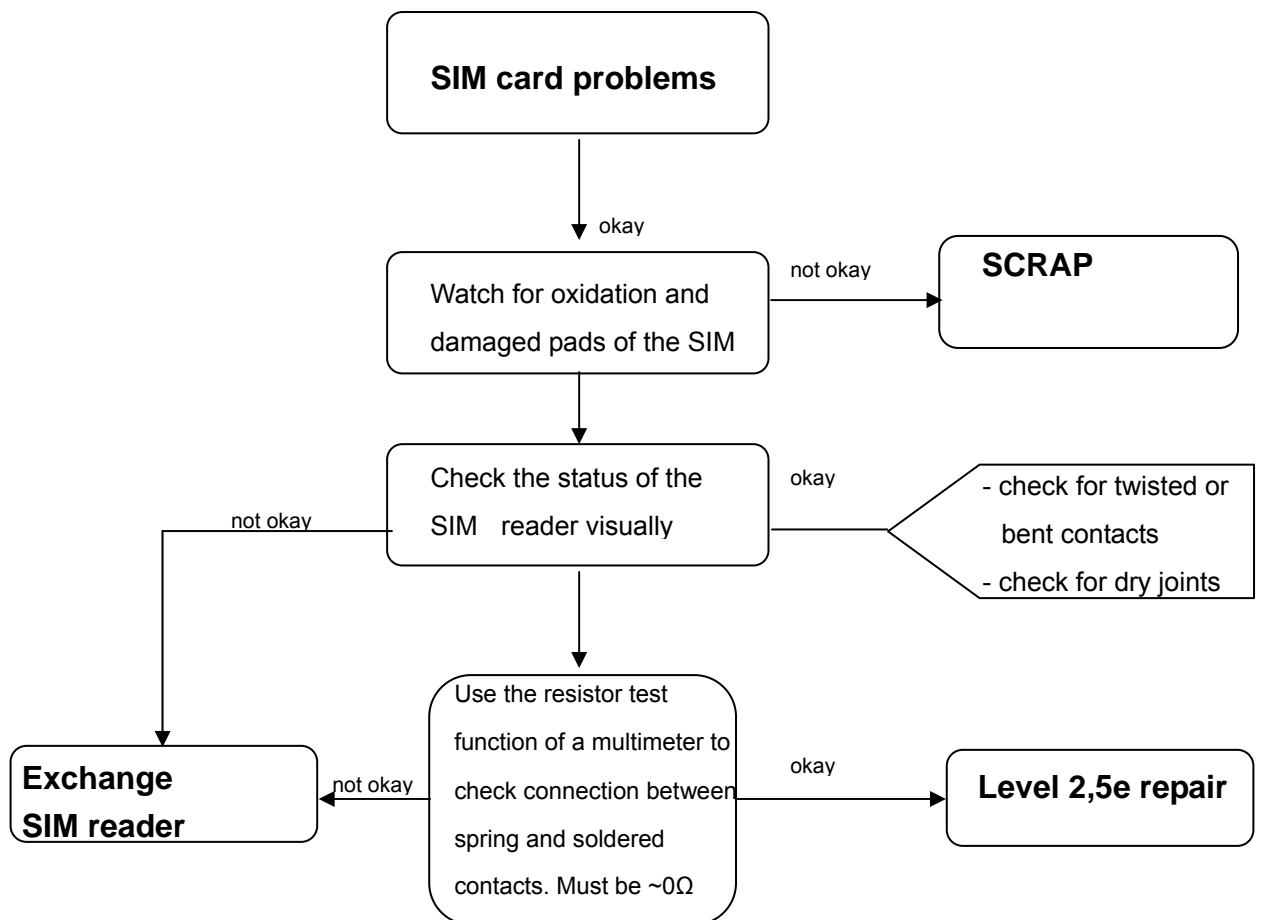
E-commerce order number: L50615-Z77-C240

Soldering temperature: 240 - 255°C

IRIS diagnosis code: 34100 Keys/ Side

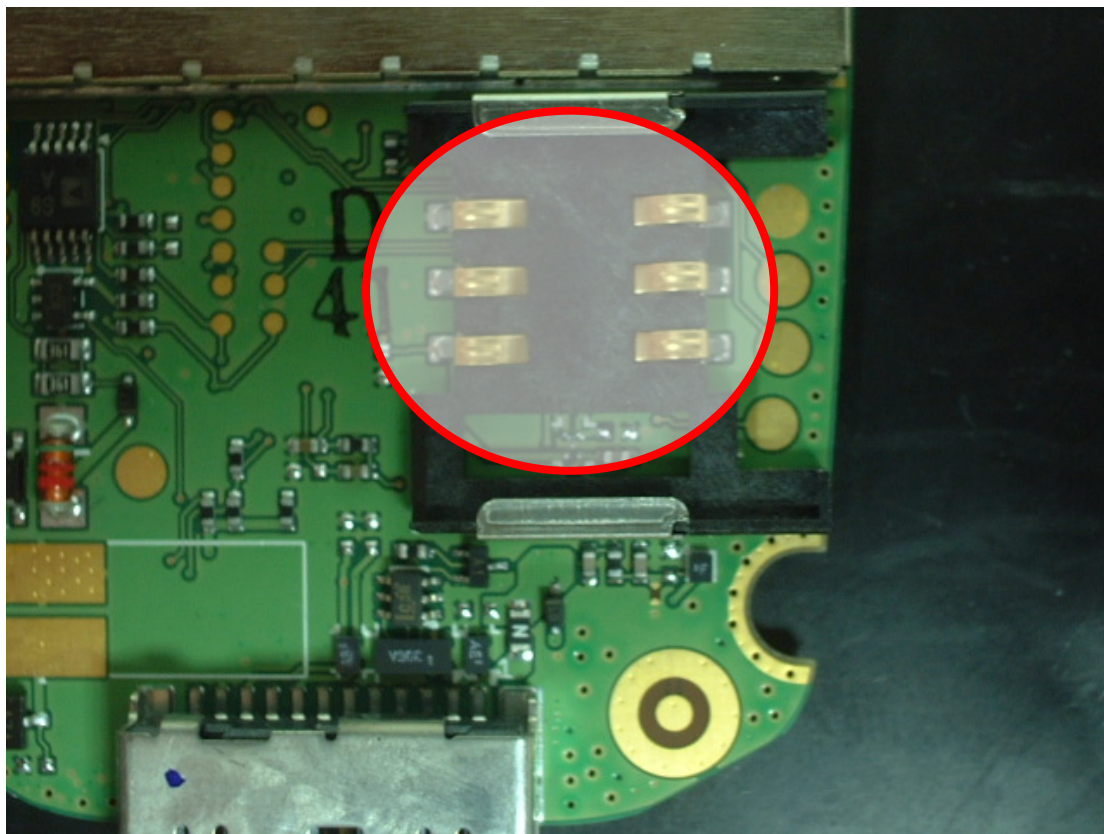
6. SIM reader (J302)

Fault symptoms	
Customer	GRT
Handset does not accept SIM	SIM card problem



SIM reader

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.



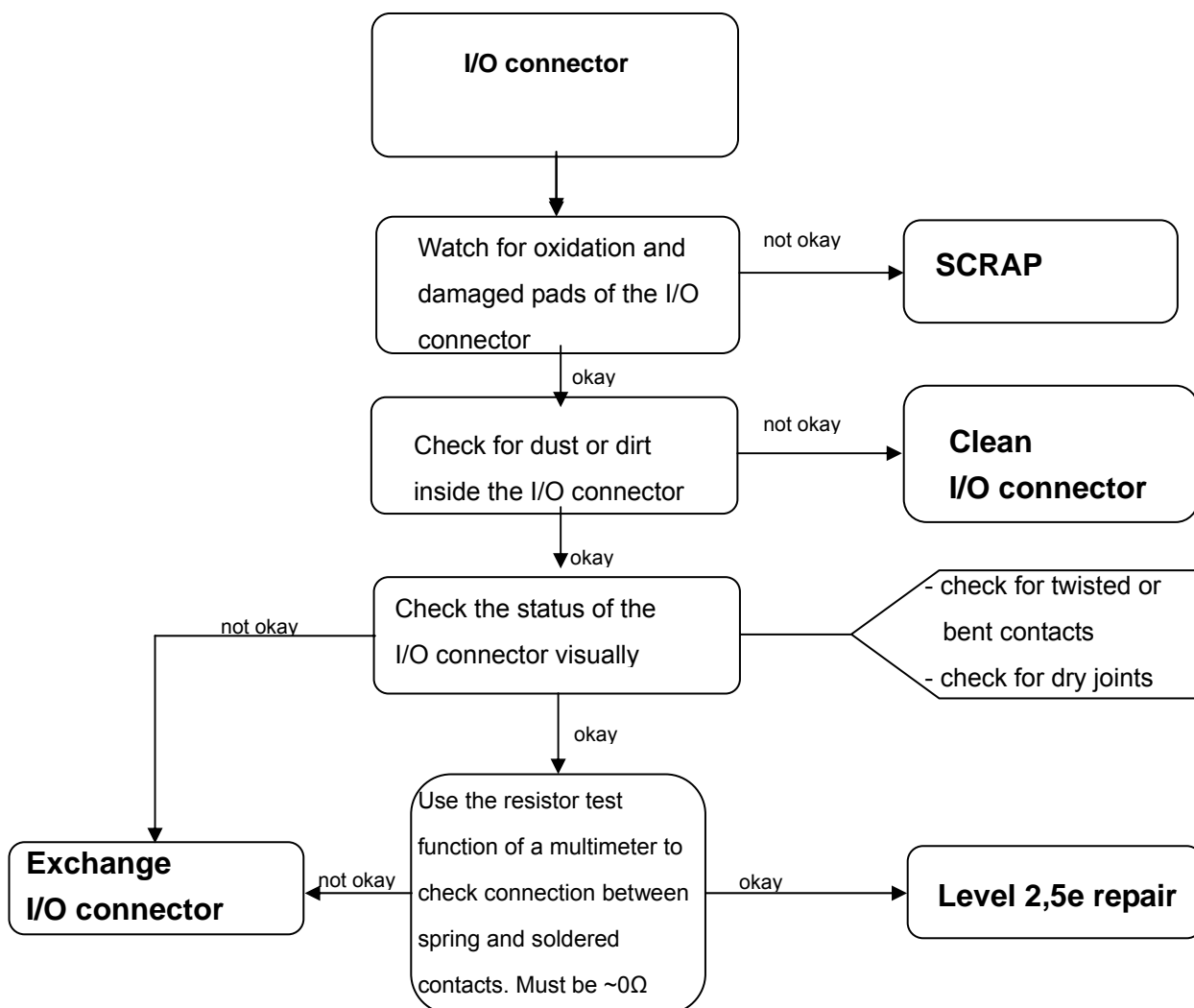
E-commerce order number: L50634-Z97-C374

Soldering temperature: 240 - 255°C

IRIS diagnosis code: 43300 Interface/ SIM reader/ Mechanical damage

7. I/O connector (J304)

Fault symptoms	
Customer	GRT
Charging problems Problems with external loudspeaker or microphone when using a car kit Problems with accessories connected to the I/O connector	No connection to GRT



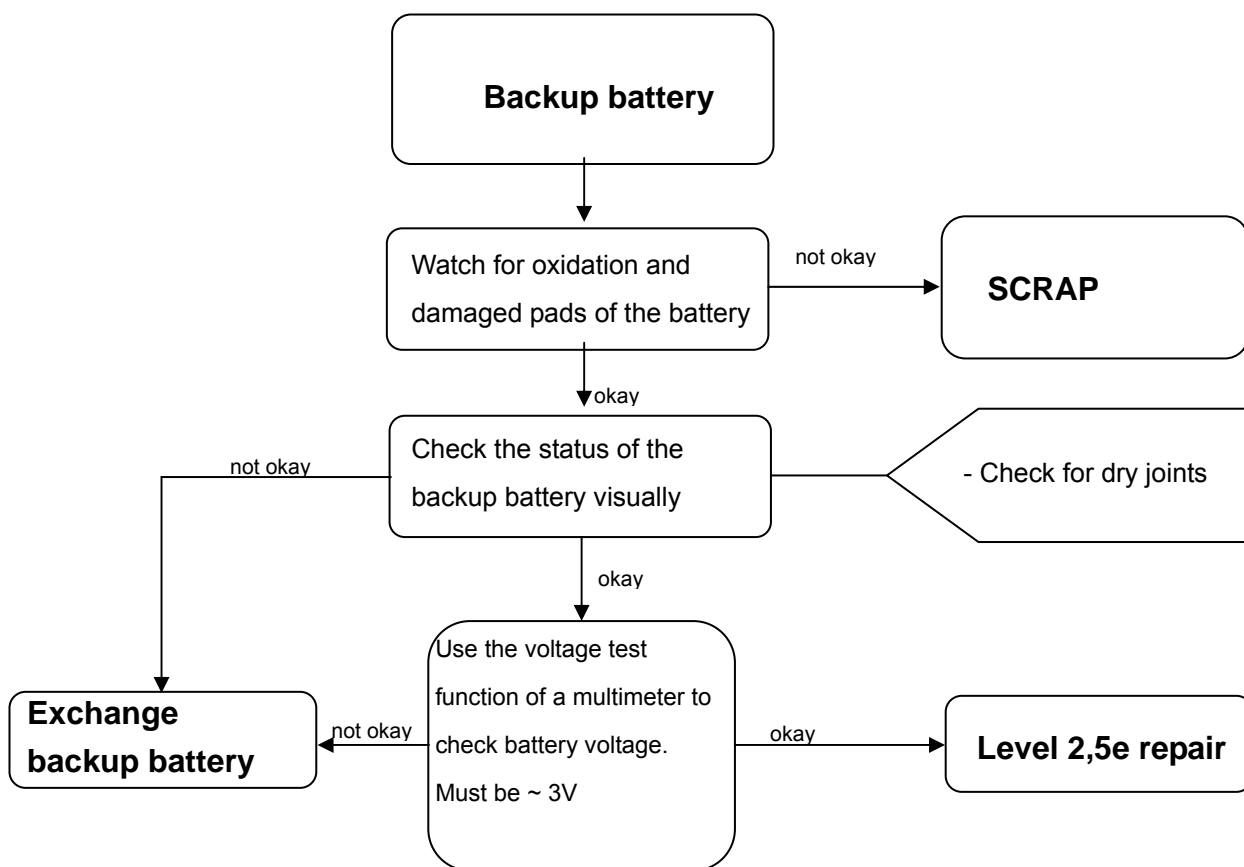
E-commerce order number: L50634-Z97-C375

Soldering temperature: 240 - 255°C

IRIS diagnosis code: 46100 Interface/Charging connector/ Mechanical damage

8. Backup battery (BT414R)

Fault symptoms	
Customer	GRT
After removing and reassembling the battery, the time is not correct or default value.	n/a



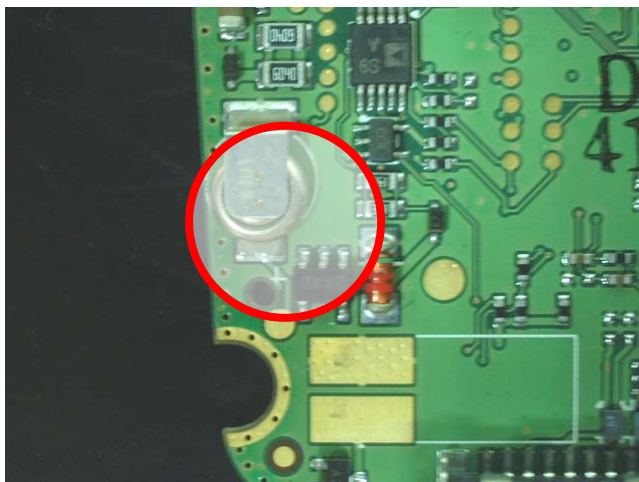
Backup battery

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number: L50645-K1310-X320

Soldering temperature: 220 - 230°C

IRIS diagnosis code: C8100 Settings/ General/ Time/ Date



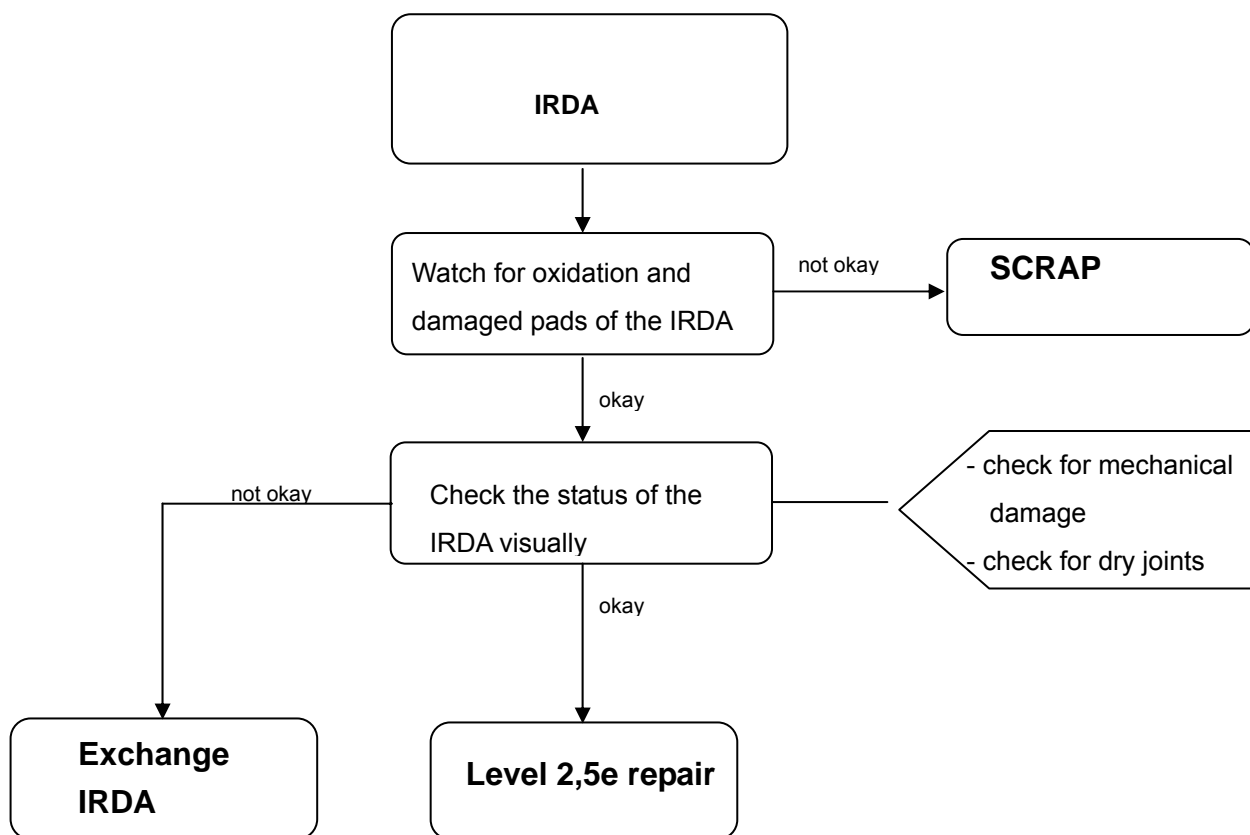
Rechargeable battery (BT414R) specification

Items	Contents	Remarks
Model No.	ML414R/F9CE	
Nominal Voltage	3 V	
Nominal Capacity	0.8 mAh	End Voltage : 2.0V (after two times Reflow)
Recommendable Drain	< 5 μ A	For memory back up use
Charge-discharge Cycles	c.a. 15 cycles c.a. 400 cycles	100% DOD Cycle (*1) (after two times Reflow) 10% DOD Cycle (*1) (after two times Reflow)
Charge		Never trickle
Constant Voltage	2.8 ~ 3.2V	At 2.5V of the battery voltage
Charge Current	< 0.06 mA	Refer to items 8, 9 (after two times Reflow)
Operating Temperature	-20 to 45°C(-4 to 113° F) 45 to 85°C(113 to 185° F)	Nominal Within 100 days (after two times Reflow)
Anode(-) can Surface temperature of Cell in Reflow Soldering	Max. 230°C(446° F)	Within 5 second
Reflow times	Twice	
Dimension & Configuration	Refer to attached Figure	
Standard mass	c.a. 0.09 g	

(*1); DOD: Depth of Discharge of Nominal Capacity

9. IRDA (U103)

Fault symptoms	
Customer	GRT
No infrared connection possible	n/a



IRDA

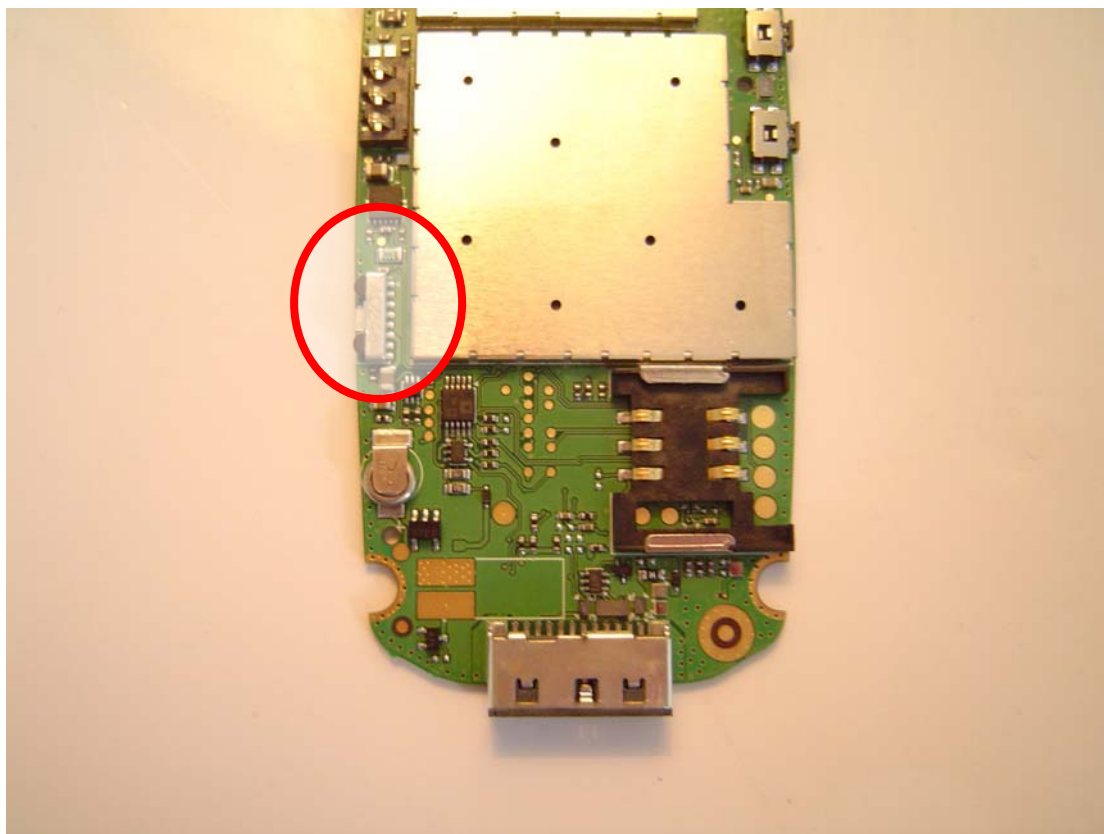
Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number: L50610-U6153-D670

Soldering temperature: 240 - 255°C

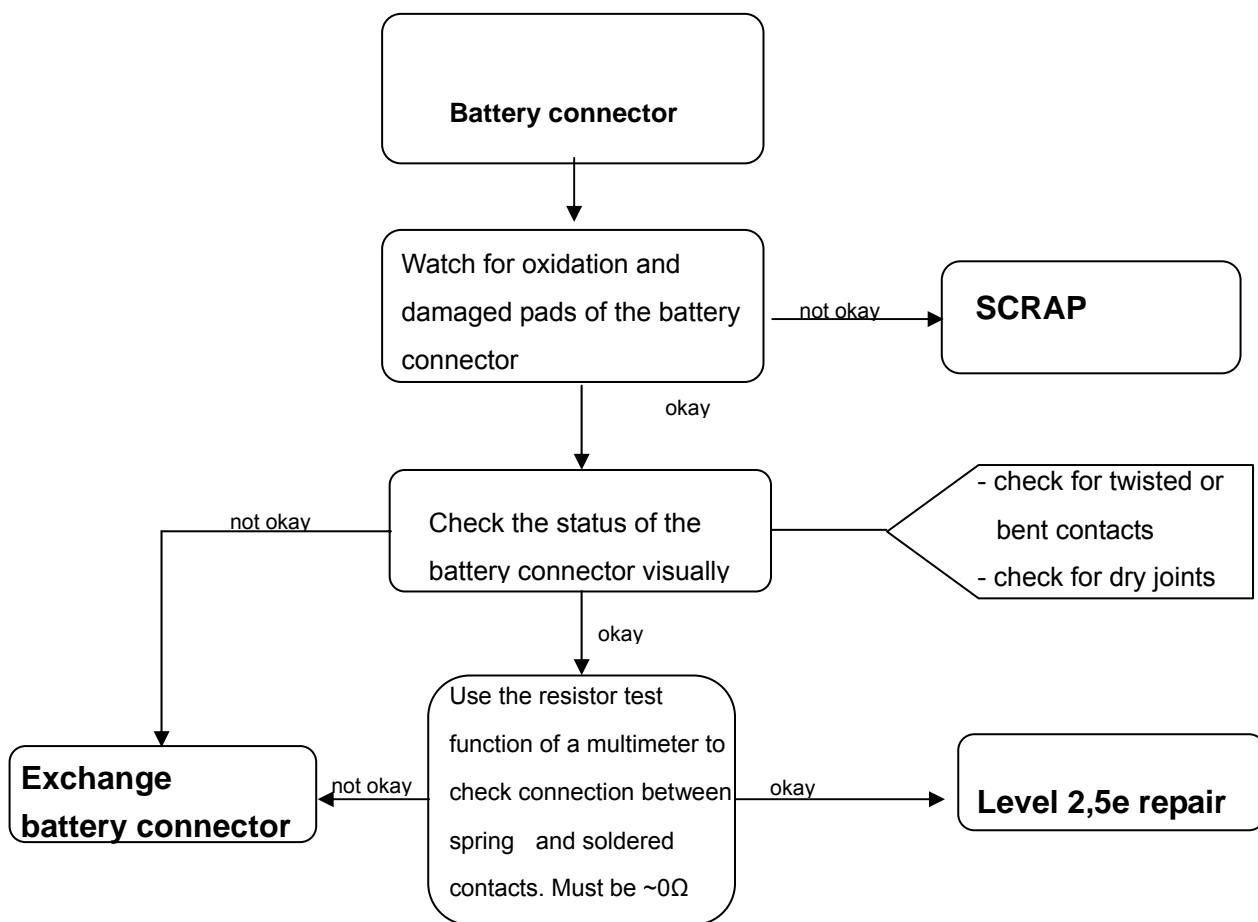
IRIS diagnosis code: 41100 Interfaces/ IRDA/ No function

41300 Interfaces/ IRDA/ Mechanical damage



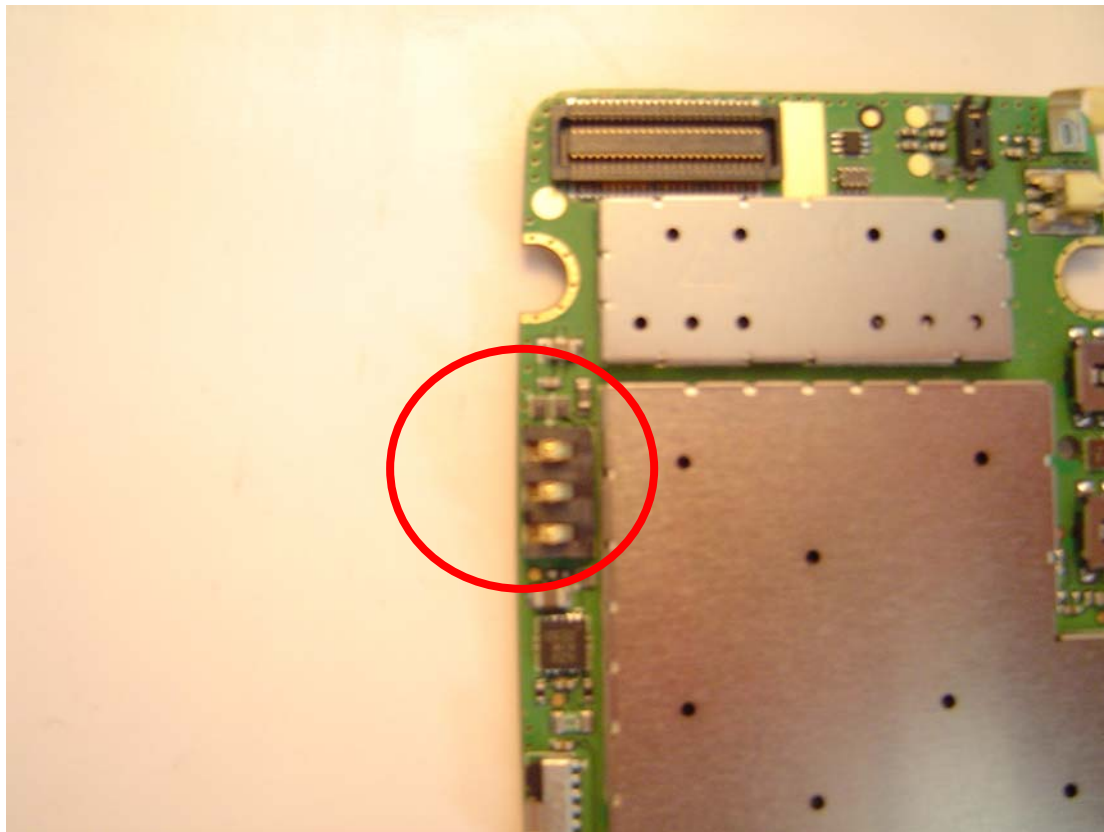
10. Battery connector (J300)

Fault symptoms	
Customer	GRT
Mobile does not switch on	No connection to GRT



Battery connector

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

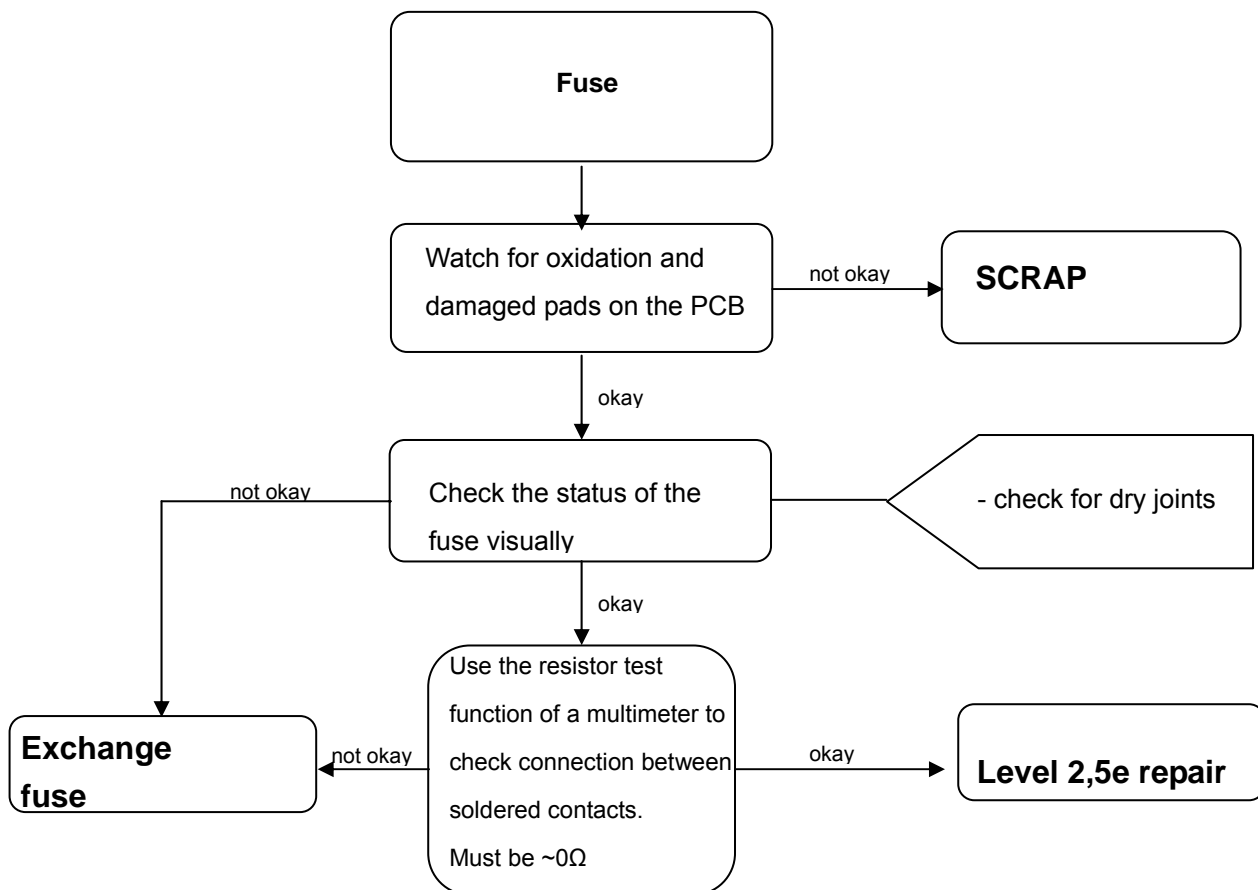


E-commerce order number: L50634-Z97-C376
Soldering temperature: 240 - 255°C
IRIS diagnosis code: 13000 Battery/ Mechanical damage

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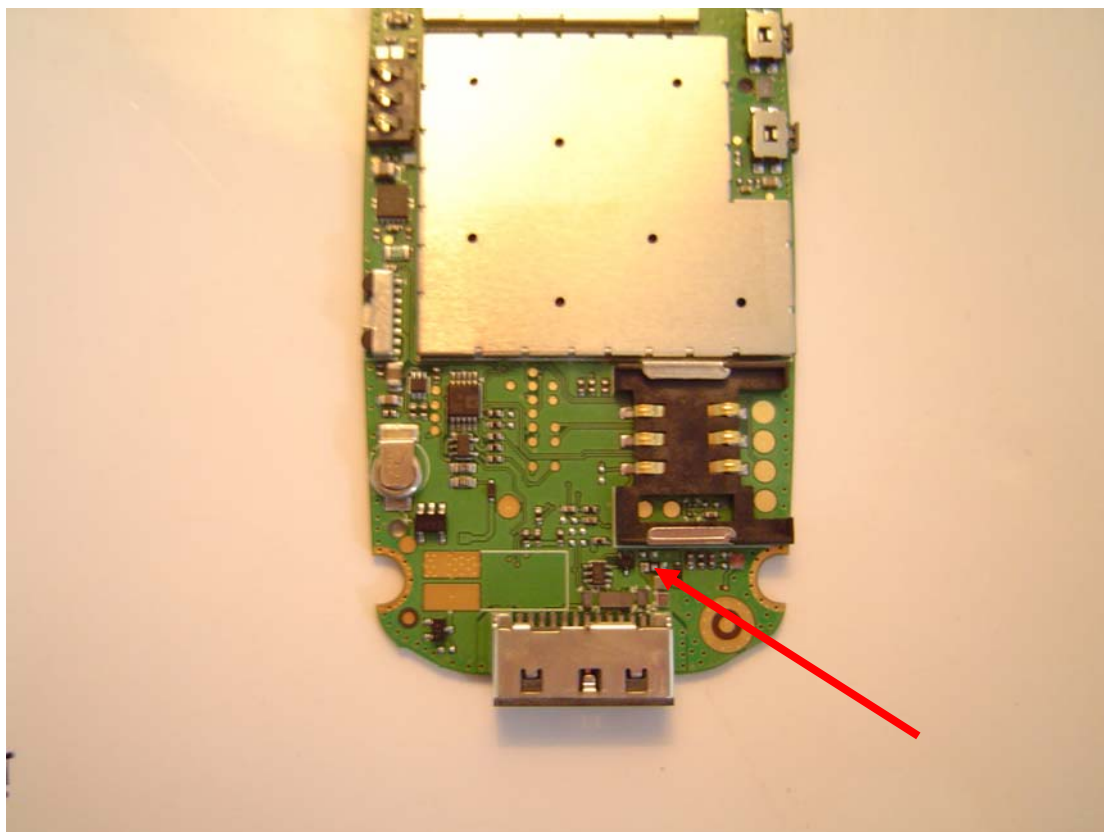
11. Fuse (F300)

Fault symptoms	
Customer	GRT
Battery charging does not work	n/a



Fuse

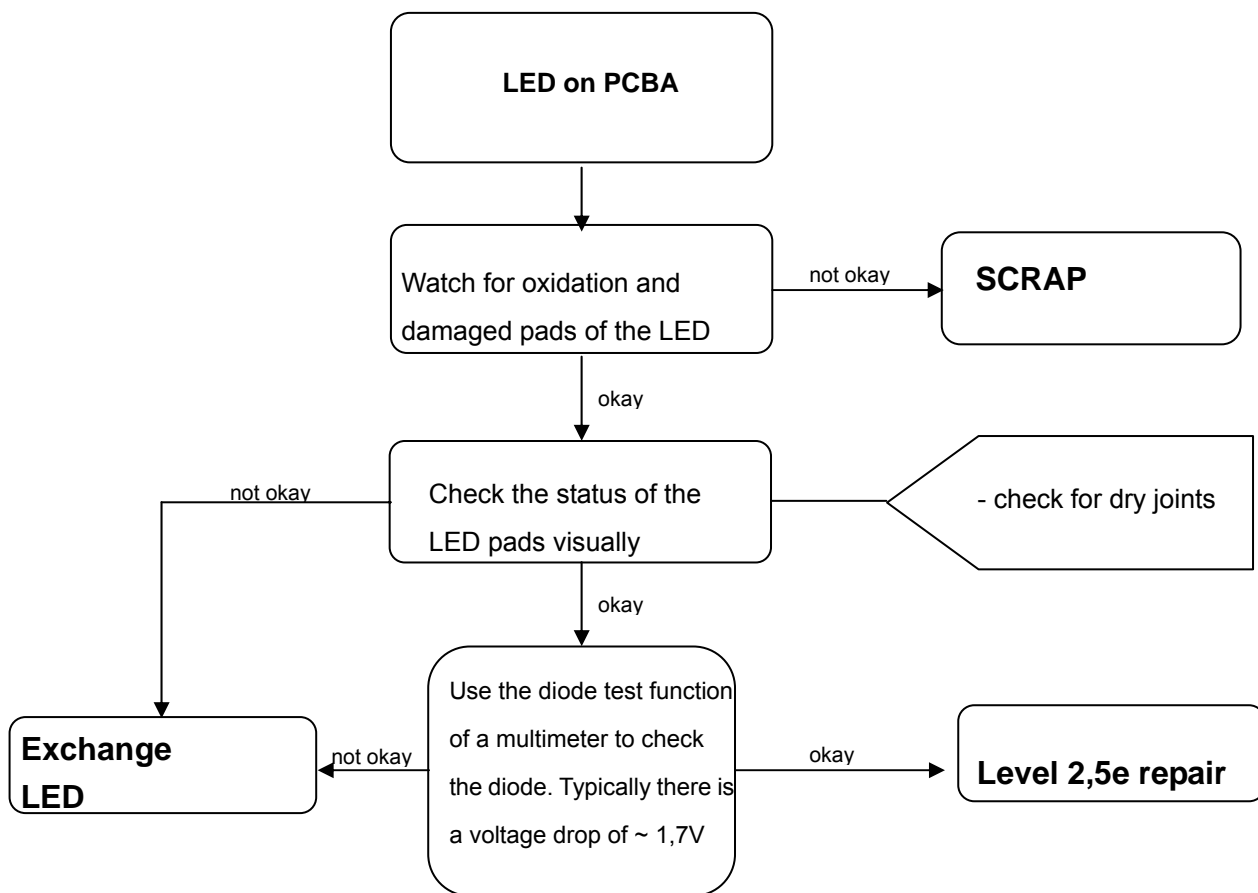
Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.



E-commerce order number: L50645-A820-Y20
Soldering temperature: 240 - 255°C
IRIS diagnosis code: 11100 Battery/ No charging/ Deep discharge

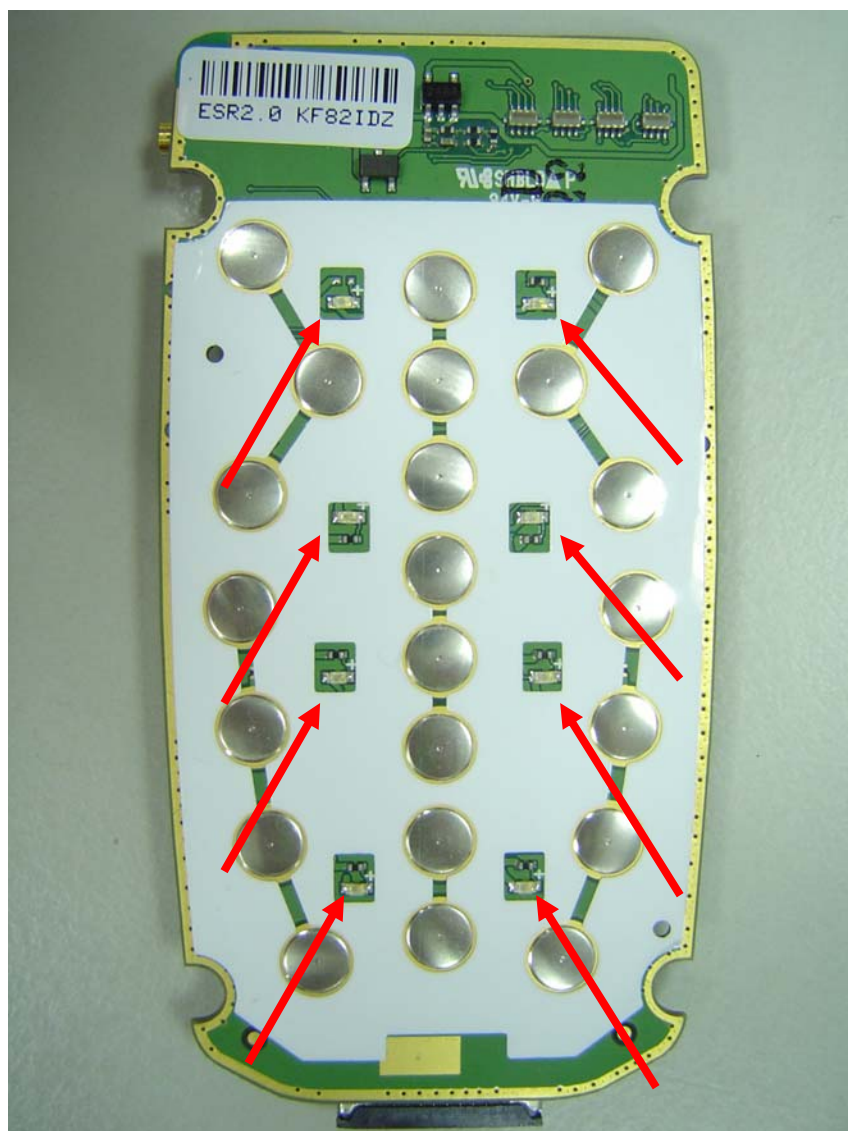
12. LED on PCBA

Fault symptoms	
Customer	GRT
LED does not work or not bright	n/a



LED

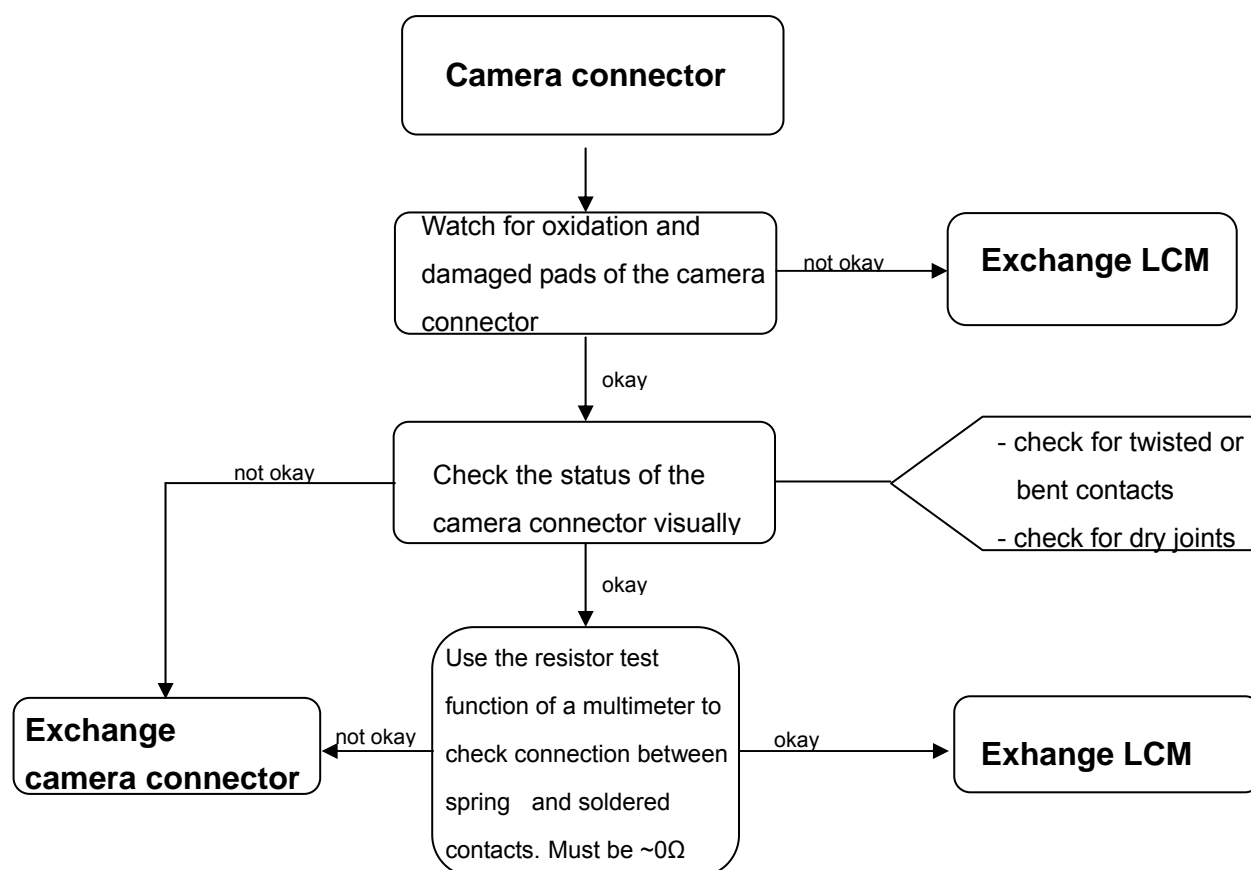
Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.



E-commerce order number: L50640-L2123-D670
Soldering temperature: 240 - 255°C
IRIS diagnosis code: 36000 Keys/ Illumination

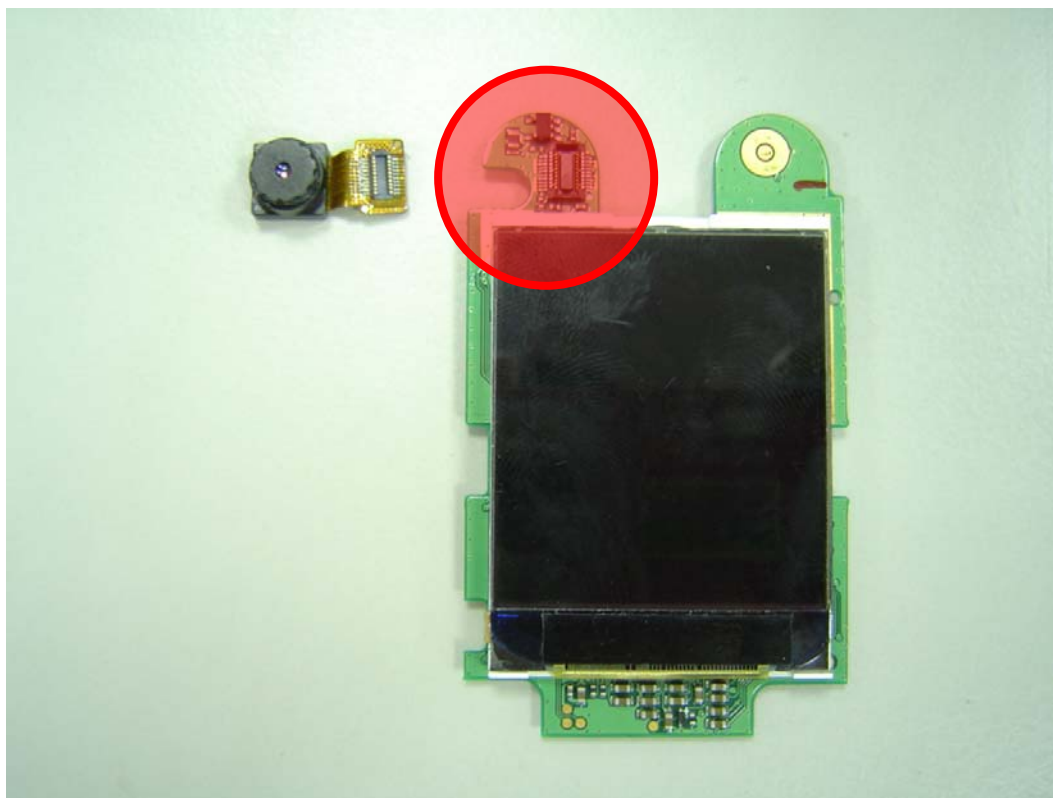
13. Camera connector

Fault symptoms	
Customer	GRT
Camera malfunction	n/a



Camera connector

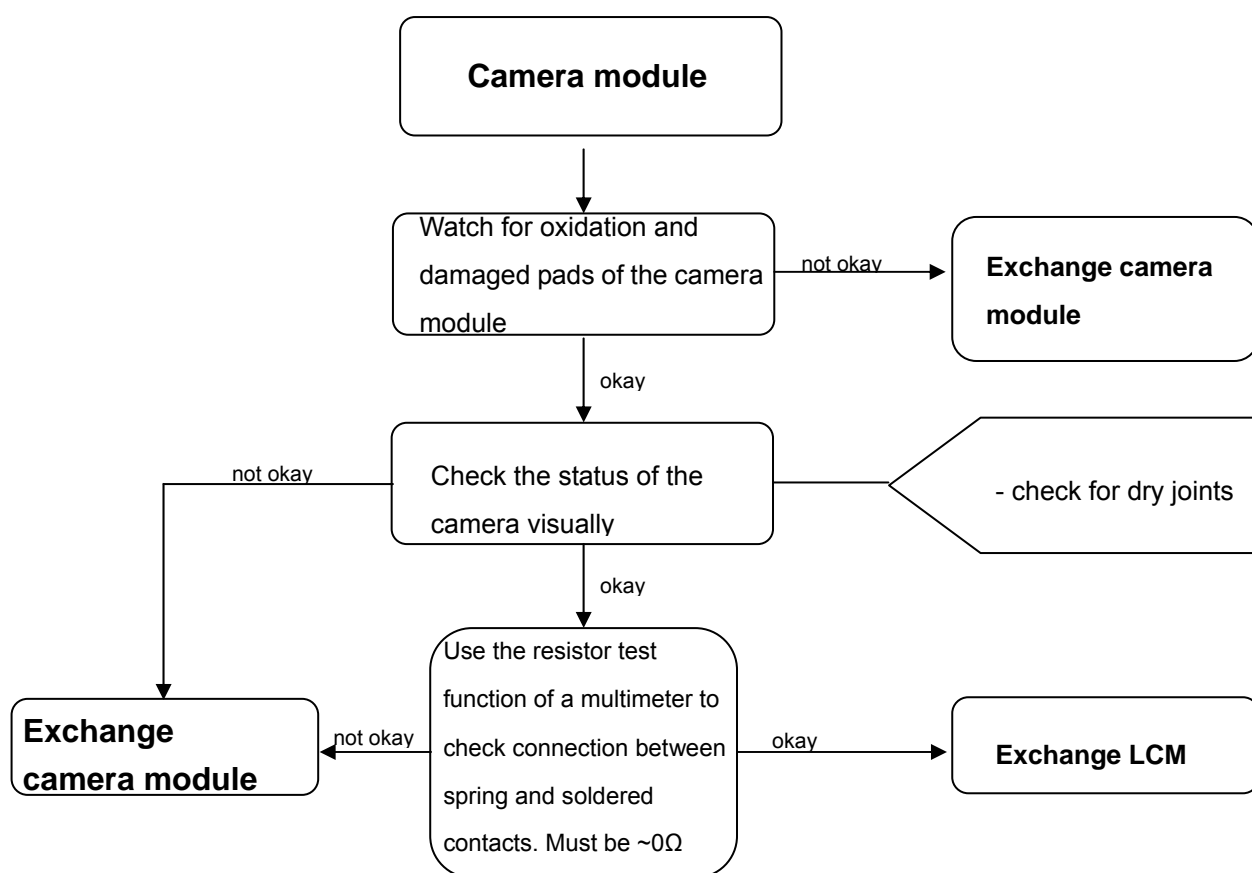
Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.



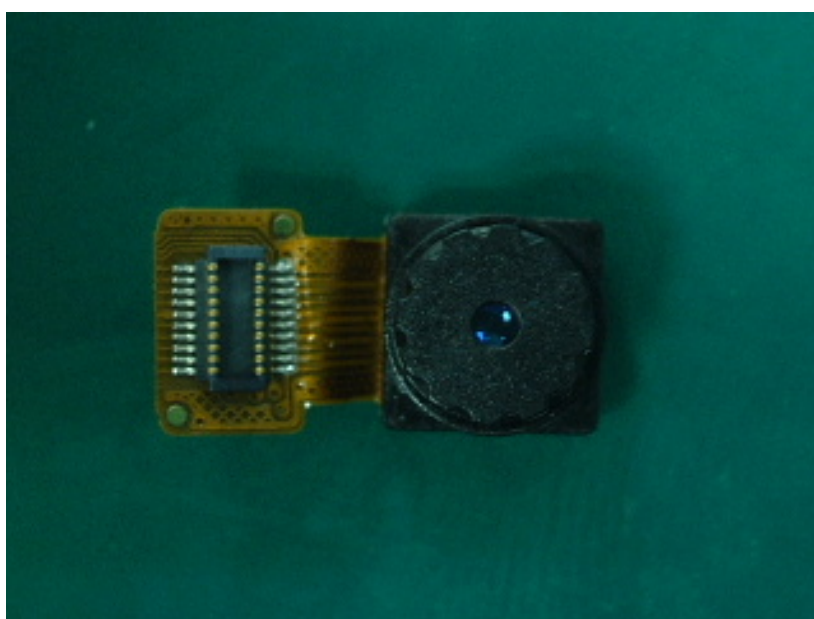
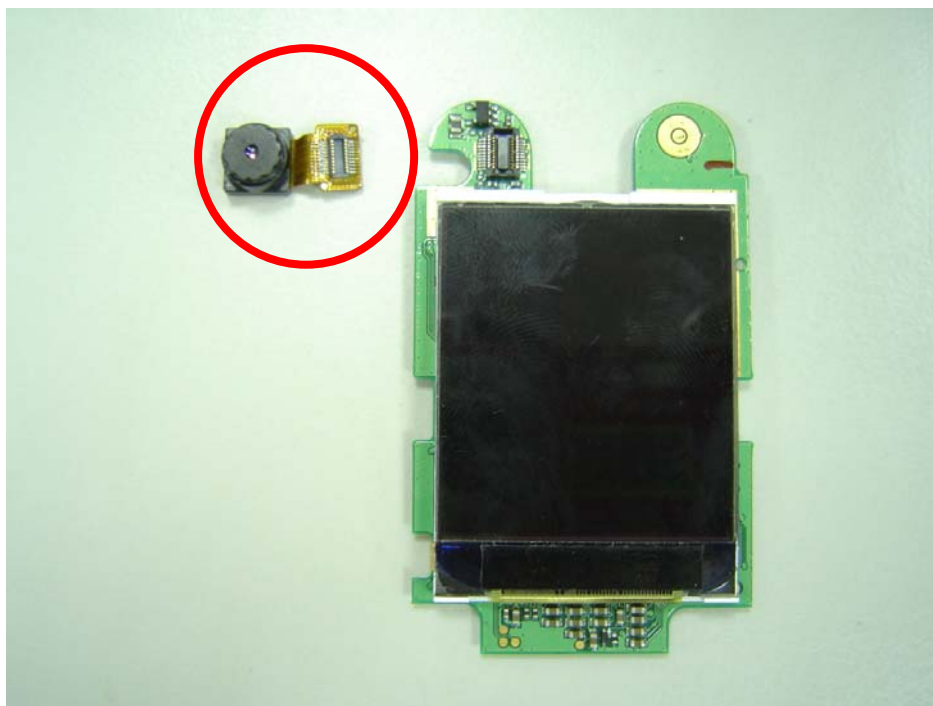
E-commerce order number: L50634-Z97-C378
Soldering temperature: 240 - 255°C
IRIS diagnosis code: BA000 Accessories/ Camera

14. Camera module

Fault symptoms	
Customer	GRT
Camera malfunction	n/a



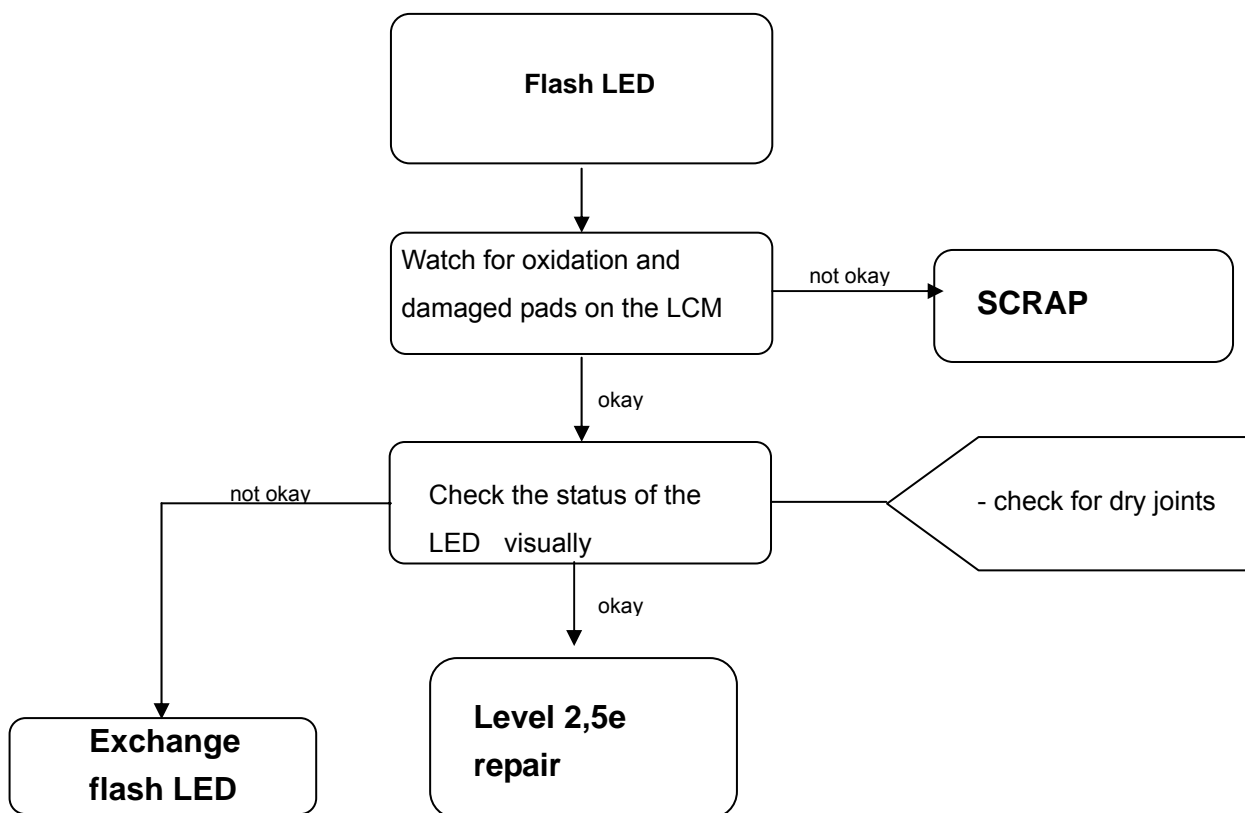
Camera module



E-commerce order number: L50653-Z5-C297
Soldering temperature: 240 - 255°C
IRIS diagnosis code: BA000 Accessories/ Camera

15. Flash LED on the LCM

Fault symptoms	
Customer	GRT
-Flash LED does not work -Flash LED not bright	n/a



Flash LED

Use soldering iron to remove defective component. Avoid excessive heat! Watch surrounding components! Resolder new component afterwards.

E-commerce order number: L50640-L2106-D670

Soldering temperature: 240 - 255°C

IRIS diagnosis code: 00000 Miscellaneous

